
(Slip Opinion)

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**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

)	
In re:)	
)	PSD Appeal Nos. 96-9,
Kawaihae Cogeneration Project)	96-10, 96-11, 96-14,
)	& 96-16
PSD/CSP Permit No. 0001-01-C)	
)	

[Decided April 28, 1997]

ORDER DENYING REVIEW

***Before Environmental Appeals Judges Ronald L.
McCallum, Edward E. Reich and Kathie A. Stein.***

KAWAIHAE COGENERATION PROJECT

PSD Appeal Nos. 96-9, 96-10, 96-11, 96-14, & 96-16

ORDER DENYING REVIEW

Decided April 28, 1997

Syllabus

Five petitioners seek review of a prevention of significant deterioration ("PSD") permit and approval to construct issued by the State of Hawaii's Department of Health ("DOH") to Kawaihae Cogeneration Partners ("KCP"), pursuant to Clean Air Act § 165, 42 U.S.C. § 7475. The permit authorizes KCP to construct a 58-megawatt cogeneration power plant near the Kawaihae Harbor, on land leased from Hawaii's Department of Hawaiian Home Lands ("DHHL"). The PSD permit is a portion of a "covered source permit" that also includes operating conditions issued pursuant to the State's program implementing Clean Air Act Title V, 42 U.S.C. §§ 7661-7661f. The PSD permit provides that as "best available control technology" ("BACT") for nitrogen oxides, the plant's combustion turbines must be equipped with selective catalytic reduction ("SCR") units. The SCR units include equipment for the storage and handling of anhydrous ammonia.

The petitioners are the Hawaii Electric Light Company ("HELCO") and four individual residents living near the site of the proposed plant. HELCO opposes DOH's permit decision, alleging that: (1) in selecting SCR as BACT, DOH failed to account for the collateral environmental impacts posed by a potential catastrophic release of ammonia; and (2) DOH erred in setting the permit's maximum emission limits for certain pollutants, because KCP's air impact analysis was based on an unlawful "merged plume dispersion" modeling technique, and because DOH should have required modeling for terrain-induced downwash. The individual petitioners allege that: (1) the BACT analysis for SCR was inadequate; (2) studies of baseline levels of air pollution were not performed properly; (3) meteorological studies were inadequate; (4) the effect of the plant on soils and vegetation was not properly analyzed, and an environmental impact statement ("EIS") should have been prepared; (5) the plant will emit "excessive" amounts of sulfur, ammonia, lead and other chemicals; (6) DOH improperly ignored greenhouse gas emissions; (7) the permit process was tainted by procedural and administrative defects; (8) the plant will

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adversely affect human health and the environment; (9) the plant will displace native Hawaiians from their homes; (10) an ammonia risk management plan required by the permit should be subject to public review; (11) regulations were incorrectly cited in the permit.

Held: The Board concludes that petitioners have not met their burden of showing that DOH's permit decision should be reviewed. With respect to HELCO's petition, the Board rejects HELCO's claim that a hypothetical failure of the SCR ammonia system warrants further consideration as a "collateral environmental impact." DOH properly considered the risks of ammonia storage and handling, and concluded that permit and regulatory safeguards would minimize any risk. The Board finds that the "merged plume dispersion" issue was not preserved for review, because it was not raised during the public comment period as HELCO was obligated to do, and so review of that issue must be summarily denied. Further, the Board concludes that because KCP selected a stack height based on the regulatory "good engineering practices" formula, the regulations did not require KCP to conduct modeling for terrain-induced downwash.

With respect to the individual petitions, the Board rejects KCP's claim that two petitions should be dismissed as untimely. Petitioners were mistakenly instructed by DOH to file petitions with EPA's Headquarters Hearing Clerk, and one petition was received by the clerk within the filing deadline. Although the other petition was received by the Headquarters Hearing Clerk two days beyond the filing deadline, it is unclear when the petition was received in EPA's mailroom. Under these circumstances, the petitions will not be dismissed as untimely.

As to the merits of the individual petitions, the Board concludes that: (1) DOH responded fully to concerns over the BACT analysis for SCR, and petitioners have not shown any error in DOH's response. DOH's response is consistent with EPA's "top-down" approach to BACT selection. (2) DOH responded fully to petitioners' concerns over the studies of baseline levels of air pollution, and petitioners have pointed to no flaw in DOH's approach. (3) Petitioners have merely reiterated their earlier comments concerning the meteorological studies performed by KCP (to which DOH responded fully), and petitioners have not shown that the studies were inadequate in any way. (4) There was no requirement that an EIS be performed in connection with this PSD permit issuance. KCP performed an "additional impact analysis" as required by the PSD regulations, and the analysis showed that the soils and vegetation in the area around the plant have poor productivity potential, that the plant emissions are well below federal and State ambient air quality standards, and that no adverse impact on soils and vegetation from the plant is

expected. Petitioners have not shown any error in this conclusion. (5) The record does not support petitioners' claims that the plant will emit "excessive" amounts of sulfur, ammonia, lead and other chemicals. DOH has explained that emissions of sulfur and lead will be below federal and State ambient air quality standards, and that ammonia emissions will similarly pose no threat to health. The record supports DOH's selection of diesel fuel as BACT for sulfur emissions, while allowing lower-sulfur naphtha fuel to be used as well, although naphtha was not selected as BACT because of cost and availability concerns. (6) DOH explained that there are currently no standards governing the emissions of greenhouse gases (mainly carbon dioxide) from the plant, and petitioners have provided no information that suggests this conclusion is erroneous. (7) Petitioners have pointed to no prejudicial defects in the permit review process. (8) Petitioners' generalized claims of environmental harm from the plant are not supported by the record, which shows that plant emissions will not exceed any applicable PSD increment or federal or State air quality standard. (9) The claim that native Hawaiians will be displaced from their homes is unsupported, and DOH did not err by choosing not to address the issue in the permit process since the issue is within the purview of the DHHL. (10) The permit condition requiring submission of an ammonia risk management plan relates to State operating permit requirements, and the Board does not have jurisdiction to review the non-PSD portion of this permit. (11) The regulatory citations to which petitioners object concern the State operating permit program, and the Board does not have jurisdiction to review that portion of this permit. For these reasons, the petitions for review are denied.

Before Environmental Appeals Judges Ronald L. McCallum, Edward E. Reich and Kathie A. Stein.

Opinion of the Board by Judge Reich:

I. Background

We have consolidated for decision five petitions seeking review of a decision of the State of Hawaii's Department of Health ("DOH") granting a prevention of significant deterioration ("PSD") permit and approval to construct to Kawaihae Cogeneration Partners ("KCP"),

pursuant to Clean Air Act § 165, 42 U.S.C. § 7475.¹ The permit authorizes KCP to construct and operate a 58-megawatt cogeneration power plant. The plant will be constructed near the Kawaihae Harbor, on land leased from the Department of Hawaiian Home Lands ("DHHL"), a State agency created to administer lands described in the Hawaii Homes Commission Act of 1920.²

¹DOH administers the PSD program in Hawaii pursuant to a delegation of authority from U.S. EPA Region IX. Because Hawaii acts as EPA's delegate in implementing the federal PSD program, the permit is considered an EPA-issued permit for purposes of federal law, and is subject to review by the Board pursuant to 40 C.F.R. § 124.19. *In re Commonwealth Chesapeake Corp.*, PSD Appeal Nos. 96-2 through 96-5, slip op. at 3 n.1 (EAB, Feb. 19, 1997), 6 E.A.D. ____; *In re West Suburban Recycling and Energy Center, L.P.*, PSD Appeal Nos. 95-1 & 96-1, slip op. at 5 n.4 (EAB, Dec. 11, 1996), 6 E.A.D. ____ ("For purposes of Part 124, a delegate State stands in the shoes of the Regional Administrator [and must] follow the procedural requirements of Part 124. * * * A permit issued by a delegate is still an "EPA-issued permit" * * *") (quoting 45 Fed. Reg. 33,413 (May 19, 1980)). Pursuant to Region IX's delegation agreement with Hawaii, the Region retains the authority to concur on DOH's determinations of what constitutes "best available control technology" for the control of regulated pollutants in PSD permits issued by Hawaii, and to concur on DOH's evaluation of air impact modeling analyses. Amended Delegation Agreement, 54 Fed. Reg. 23,978 (June 5, 1989).

²The land was originally leased by Waimana Enterprises, Inc., a native Hawaiian corporation. DOH has explained that a "native [H]awaiian corporation" is "a corporation where the majority of stock is owned by persons whose ethnicity is fifty percent or more native [H]awaiian. A native [H]awaiian corporation is also entitled to preference in the selection of commercial operations on DHHL property." DOH's Response to Petitions for Review at n.1. Waimana subsequently subleased the property to KCP. Waimana is the parent company of the two wholly-owned subsidiaries that are the general and limited partners of KCP. DOH's Response at 1-2. DOH has explained that the land base administered by DHHL "is used to create residential and commercial opportunities for native [H]awaiians, and may be operated independent of many state and county regulations." *Id.* at 2.

The facility will consist of two 21-megawatt combustion turbines, two unfired heat recovery steam generators and a 16-megawatt steam turbine generator. The permit provides that as the "best available control technology" ("BACT"),³ the combustion turbines must be equipped with steam injection for the control of nitrogen oxides ("NO_x") emissions, with additional NO_x control provided by two selective catalytic reduction ("SCR") units, resulting in stack outlet NO_x concentration of 15 parts per million by volume dry ("ppmvd") at 15% oxygen. The permit further provides that the turbines will burn low-sulfur naphtha distillate fuel with a maximum sulfur content of 0.08% for two years, after which (depending upon the availability and cost of naphtha) the turbines will burn either naphtha, or diesel fuel having a sulfur content no greater than 0.4% by weight. The SCR units will include equipment for storage and handling of anhydrous ammonia, including a 10,000 gallon storage tank and vaporizer.⁴

Pursuant to State law, KCP submitted a combined PSD and Clean Air Act Title V operating permit application to DOH in late 1993.⁵ Following review of the permit

³As explained in more detail *infra*, Part II.A., BACT is an emissions limitation based on the maximum degree of reduction achievable for a regulated pollutant, determined on a case-by-case basis. See 40 C.F.R. § 52.21(b)(12).

⁴SCR is a "post-construction control technology which reduces NO_x by reacting ammonia with NO_x in the presence of a catalyst to form water and nitrogen." Admin. Record 8-F at 11. Thus, SCR technology requires the storage and handling of anhydrous ammonia.

⁵State law combines the PSD and Title V requirements into a single permit referred to as a "covered source permit" ("CSP"). See H.A.R. § 11-60-01 *et seq.* (Hawaii's Clean Air Act State Implementation Plan, see 40 C.F.R. § 52.620); H.A.R. § 11-60.1-1 *et seq.* (Hawaii's Title V program). In general, a PSD permit is a pre-construction permit that sets forth
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application, DOH issued a draft permit for public review and comment, including a public hearing (held in October 1995). Following consideration of public comments, DOH prepared a final proposed permit, which it submitted to EPA Region IX for concurrence in September 1996, pursuant to Hawaii's Amended Delegation Agreement. On October 21, 1996, Region IX advised DOH that it concurred in the permit.⁶ DOH issued a final decision granting the permit on October 29, 1996. These petitions for review followed.

The petitioners are four individual residents of the State of Hawaii who live near the proposed facility, and the

⁵(...continued)

conditions governing the emissions controls that must be utilized by a new facility and emissions limits for certain regulated pollutants. See 42 U.S.C. §§ 7470-7479. Title V operating permits encompass emissions limitations and other conditions necessary to assure compliance with the Clean Air Act. Hawaii's Title V program was granted interim approval by EPA in December 1994, and thus the Title V component of the CSP was issued pursuant to State law. See 40 C.F.R. part 70, Appendix A, and 61 Fed. Reg. 56,368 (Oct. 31, 1996). The Board's jurisdiction with respect to review of this permit extends only to review of the PSD component of the CSP, which, as explained *supra* n.1, is considered a federal permit. See 40 C.F.R. § 124.19.

⁶In connection with its review of the permit, Region IX required DOH to make certain permit revisions. In particular, in accordance with Title V and Clean Air Act § 112(r), Region IX required DOH to include a condition in the permit that requires KCP to submit a "risk management plan" for anhydrous ammonia. See Admin. Record 7-A. Section 112(r) concerns "prevention of accidental releases" of certain "extremely hazardous substances," including anhydrous ammonia. 42 U.S.C. § 7412(r)(3). It requires certain stationary sources that have threshold amounts of such substances to "prepare and implement a risk management plan to detect and prevent or minimize accidental releases * * * and to provide a prompt emergency response to any such releases * * *." *Id.* § 7412(r)(7)(B)(ii). Pursuant to the Title V regulations, operating permits must include a condition relating to the § 112 risk management plan requirement. See 40 C.F.R. §§ 70.2 & 70.6.

Hawaii Electric Light Company ("HELCO").⁷ The petitions collectively raise numerous objections to DOH's decision to allow construction of the facility. The objections relate primarily to DOH's analysis of SCR as BACT for the facility, DOH's setting of maximum emission limits for certain pollutants, and alleged negative impacts that emissions from the facility will have on the surrounding residents and the environment. At the Board's request, DOH submitted a response to the petitions. The Board also granted requests by KCP and Region IX to respond to the petitions. DOH, KCP, and Region IX argue that the petitions fail to meet the standards necessary to invoke Board review of DOH's decision, as set forth in 40 C.F.R. § 124.19.⁸ For the reasons explained below, we agree and must therefore deny the petitions.⁹

⁷The individual petitioners are: Jojo Tanimoto, Linda Dela Cruz, Frank Hicks, and James Growney. HELCO is one of three entities (including KCP) seeking approval from the Hawaii Public Utilities Commission to construct and operate a power plant on the Big Island of Hawaii. As such, HELCO is a competitor of KCP. HELCO has also submitted a PSD/CSP permit application to DOH to construct and operate a power plant on Hawaii, in a different location from Kawaihae.

⁸Petitioners Tanimoto, Dela Cruz, Growney, and HELCO moved the Board for leave to file replies to DOH's, KCP's, and Region IX's responses to the petitions. The Board denied the requests by separate orders. The Board notes that the rules governing petitions for review do not contemplate further briefing by petitioners, except when the Board grants review of a petition. See 40 C.F.R. § 124.19(c). Although the Board will exercise its discretion to allow supplemental briefing in appropriate cases prior to deciding whether to grant review, in this instance the Board determined that supplemental briefing would not aid it in its deliberations. The petitions, the responses to the petitions, and the administrative record provide ample basis on which the Board can evaluate the issues raised in the petitions.

⁹Petitioners Tanimoto, Dela Cruz, and Growney also submitted petitions to the Administrator pursuant to Clean Air Act Title V asking the
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II. Discussion

A. Statutory Background

The Clean Air Act's PSD program serves to regulate air pollution in areas (known as "attainment" areas) where air quality meets or is cleaner than the national ambient air quality standards ("NAAQS"),¹⁰ as well as areas that cannot be classified as "attainment" or "non-attainment" areas ("unclassifiable" areas). Clean Air Act §§ 160 *et seq.*, 42 U.S.C. § 7470 *et seq.*; see *In re EcoEléctrica, L.P.*, PSD Appeal Nos. 96-8 & 96-13, slip op. at 5 (EAB, Apr. 8, 1997), 7 E.A.D. ____; *In re Commonwealth Chesapeake Corp.*, PSD Appeal Nos. 96-2 through 96-5, slip op. at 5 (EAB, Feb. 19, 1997), 6 E.A.D. _____. The NAAQS are "maximum concentration 'ceilings' measured in terms of the total concentration of a pollutant in the atmosphere." New Source Review Workshop

⁹(...continued)

Administrator to object to the permit. Title V authorizes the Administrator to object to the issuance of a Title V permit if she determines that the permit is "not in compliance with the applicable requirements" of Title V. 42 U.S.C. § 7661d(b). The Title V petitions made allegations substantially identical to those raised in the pending PSD petitions. The Administrator denied the Title V petitions. The Administrator denied petitioners' request insofar as the allegations made by petitioners related to the PSD issues, citing the Board's exclusive delegated authority to decide petitions for review of the PSD conditions of a federally-issued permit. As to the other issues raised in the petitions, the Administrator determined that petitioners had not demonstrated grounds for the Administrator to object to the permit under Title V. See Order Denying Petition[s] for Objection to Permit at 3-4 (Adm'r, Mar. 10, 1997).

¹⁰NAAQS have been set for six criteria pollutants: sulfur dioxide, particulate matter, nitrogen oxides, carbon monoxide, ozone, and lead. See 40 C.F.R. §§ 50.4-50.12.

Manual at C.3 (hereafter "Draft Manual").¹¹ The primary NAAQS "define levels of air quality which the Administrator judges are necessary, with an adequate margin of safety, to protect the public health," and the secondary NAAQS "define levels of air quality which the Administrator judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant." 40 C.F.R. § 50.2(b).

The goals of the PSD program are:

(1) to ensure that economic growth will occur in harmony with the preservation of existing clean air resources; (2) to protect the public health and welfare from any adverse effect which might occur even at air pollution levels better than the [NAAQS]; and (3) to preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas.

Draft Manual at 5. To that end, the PSD regulations at 40 C.F.R. § 52.21 require, among other things, that new major stationary sources of air pollution and major modifications of such sources be carefully reviewed prior to construction to ensure that emissions from such facilities will not cause exceedance of the NAAQS or applicable PSD ambient air quality "increments". 40 C.F.R. § 52.21 *et seq.* A PSD "increment" refers to "the maximum allowable *increase* in

¹¹The New Source Review Workshop Manual is a draft document issued by EPA's Office of Air Quality Planning and Standards in October 1990. It was developed for use in conjunction with new source review workshops and training, and to guide permitting officials. Although it is not accorded the same weight as a binding Agency regulation, it has been looked to by this Board as a statement of the Agency's thinking on certain PSD issues. See *EcoEléctrica, L.P.*, slip op. at 5 n.3, 7 E.A.D. ____; *In re Masonite Corp.*, 5 E.A.D. 551, 558 n.8 (EAB 1994).

concentration that is allowed to occur above a baseline concentration for a pollutant." Draft Manual at C.3; 40 C.F.R. § 52.21(c) (setting forth increments for regulated pollutants).

Among other requirements, and of importance to this appeal, the PSD regulations require that new major stationary sources and major modifications of such sources employ the "best available control technology" to minimize emissions of regulated pollutants. 42 U.S.C. § 7475(a)(4); 40 C.F.R. § 52.21(j)(2). BACT is defined in part as follows:

[BACT] means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under [the] Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

40 C.F.R. § 52.21(b)(12). Permit issuers normally use a "top-down" method for determining BACT:

[T]he top-down process provides that all available control technologies be ranked in descending order of control effectiveness. The PSD applicant first examines the most stringent -- or "top" -- alternative. That alternative is established as BACT unless the

applicant demonstrates, and the permitting authority in its informed judgment agrees, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not "achievable" in that case.

Draft Manual at B.2.

B. Standard of Review

Under the regulations that govern the Board's review of PSD permit decisions, a PSD permit decision will ordinarily *not* be reviewed unless the decision is based on either a clearly erroneous finding of fact or conclusion of law, or involves an important matter of policy or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a); see, e.g., *EcoEléctrica, L.P.*, slip op. at 7, 7 E.A.D. ____; *Commonwealth Chesapeake Corp.*, slip op. at 8, 6 E.A.D. ____.

The preamble to § 124.19 states that the Board's power of review "should be only sparingly exercised," and that "most permit conditions should be finally determined at the Regional [State] level * * *." 45 Fed. Reg. 33,412 (May 19, 1980). The burden of demonstrating that review is warranted rests with the petitioner who challenges the permit decision. See 40 C.F.R. § 124.19(a); *EcoEléctrica, L.P.*, slip op. at 7, 7 E.A.D. ____; *Commonwealth Chesapeake Corp.*, slip op. at 8, 6 E.A.D. ____.

The Board has explained that in order to establish that review of a permit is warranted, § 124.19(a) requires a petitioner to both state the objections to the permit that are being raised for review, and to explain why the permit decision maker's previous response to those objections (*i.e.*, the decision maker's basis for the decision) is clearly erroneous or otherwise warrants review. See *id.*; see also *In re Puerto Rico Electric Power Authority*, PSD Appeal No. 95-2, slip op. at 3 (EAB, Dec. 11, 1995), 6 E.A.D. ____; *In re Genesee Power Station L.P.*, 4 E.A.D. 832, 866 (EAB 1993). The foregoing regulatory scheme "provides the yardstick

against which the Board must measure" petitions for review of PSD and other permit decisions. *Commonwealth Chesapeake Corp.*, slip op. at 8-9, 6 E.A.D. ____ (quoting *In re Envotech, L.P.*, UIC Appeal Nos. 95-2 through 95-37, slip op. at 6 (EAB, Feb. 15, 1996)).

C. *The Merits*

1. *Petition of Hawaii Electric Light Company*

HELCO raises two principal issues for review in its petition. First, HELCO contends that DOH erred in its analysis of SCR as BACT for the control of NO_x emissions. In particular, HELCO contends that DOH failed to adequately consider the alleged "health and safety hazards" posed by the SCR system's anhydrous ammonia unit (which includes a 10,000 gallon pressurized ammonia storage tank). HELCO's Petition at 3. HELCO argues that DOH is required to consider the "collateral environmental impacts" posed by a particular technology in determining what constitutes BACT, and that DOH erred by failing to consider the potential that a "catastrophic release of ammonia" could occur. *Id.* at 9-10. HELCO also argues that DOH failed to consider the collateral environmental impact of spent catalyst disposal. *Id.* at 10. Second, HELCO contends that the permit condition establishing maximum allowable emission limits for certain pollutants is based on two errors. HELCO argues that DOH erred in relying on data produced by "merged plume dispersion," a modeling method that HELCO contends does not comply with EPA regulations. *Id.* at 4. Further, HELCO contends that DOH ignored the effect of "terrain downwash" in setting emission limits. *Id.* We will address each of HELCO's issues in turn.

a. *DOH's BACT Analysis*

HELCO contends that DOH's alleged failure to consider the collateral environmental impact potentially

posed by a catastrophic failure of the anhydrous ammonia unit, thereby (in HELCO's words) "literally ignoring the risk of human casualties," was clearly erroneous and implicates important policy considerations. HELCO's Petition at 5. HELCO posits that the SCR's ammonia system "is susceptible to a catastrophic toxic vapor release, which could result in death or serious injury." *Id.* Specifically, HELCO alleges that:

On-site storage, transportation and use of anhydrous ammonia presents a serious risk to public health and safety because of the potential for a toxic vapor release. Ammonia is fatal if inhaled in sufficient quantities and is irritating to the eyes, nose, and throat in lesser amounts. Ammonia that is inhaled, contacted by skin, or ingested is intensely corrosive to human tissue.

An accidental rupture of the pressurized 10,000 gallon anhydrous ammonia storage tank would result in the discharge of a large quantity of ammonia gas into the atmosphere. A screening analysis performed in conformance with EPA guidance shows that catastrophic failure of the proposed 10,000 gallon anhydrous ammonia tank could produce ammonia concentrations above the Immediately Dangerous to Life and Health (IDLH) level in an area up to thirty kilometers downwind from the tank. * * * The use of anhydrous ammonia thus poses a potential threat to those persons working and living near the KCP site.

Id. at 6-7 (citing modeling analysis performed by HELCO's consultants).

HELCO acknowledges that DOH considered and addressed "slip" emissions of ammonia (ammonia that may be released during normal operation of the SCR unit). However, HELCO contends that the Clean Air Act and applicable regulations require DOH to address the potential for catastrophic release of ammonia as well. *Id.* at 9. HELCO argues that if DOH considers the potential for a catastrophic release of ammonia in its BACT analysis, then DOH "may conclude [that] the risk of using anhydrous ammonia outweighs the benefit of lower NO_x emissions, especially given that the power plant's ambient NO_x impacts without SCR would be relatively low. [DOH] must weigh the health risk from anhydrous ammonia and the health benefit of lower NO_x emissions, then explain its determination." HELCO Petition at 10. HELCO contends that DOH must similarly consider the environmental impact of disposal of spent catalyst used in the SCR system. HELCO contends that the spent catalyst "may contain heavy metal oxides such as vanadium or titanium, and may be classified as hazardous waste. No Hawaii facilities exist for the treatment or disposal of such hazardous waste." *Id.* at 10.

With respect to the potential for catastrophic failure of the ammonia system, DOH, KCP, and Region IX argue that DOH considered the collateral environmental impacts of SCR technology in its BACT analysis to the extent required by the Clean Air Act. See DOH Response at 5-6; KCP Response at 13; Region IX Response at 8-10. In particular, DOH contends that HELCO's argument is "factually incorrect," because DOH did consider the impact of a possible ammonia release in its analysis. DOH Response at 4. DOH states that it reviewed the regulatory schemes that govern ammonia storage and handling, and concluded that catastrophic failure of the ammonia system would not occur if regulatory safeguards were followed. *Id.* DOH further contends that it determined that the risk of catastrophic failure was "minimal," based on the safe use of such systems at hundreds of other facilities. *Id.* at 5. DOH also argues that

it "does not believe speculative disaster scenarios are appropriately considered in a BACT analysis." *Id.* at 5.

As noted earlier, BACT is defined as:

[A]n emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, *taking into account energy, environmental, and economic impacts and other costs*, determines is achievable for such facility * * *.

42 U.S.C. § 7479(3) (emphasis added). With respect to the so-called "collateral environmental impacts" of a proposed technology, this section has been interpreted to mean that "if application of a control system results directly in the release (or removal) of pollutants that are not currently regulated under the Act, the net environmental impact of such emissions is eligible for consideration in making the BACT determination." *In re North County Resource Recovery Associates*, 2 E.A.D. 229, 230 (Adm'r 1986). The Administrator has explained that the primary purpose of the collateral impacts clause "is * * * to temper the stringency of the technology requirements whenever one or more of the specified 'collateral' impacts--energy, environmental or economic--renders use of the most effective technology inappropriate." *In re Columbia Gulf Transmission Co.*, 2 E.A.D. 824, 826 (Adm'r 1989), *see also In re Old Dominion Electric Cooperative*, 3 E.A.D. 779, 792 (EAB 1992) ("While collateral environmental impacts are relevant to the BACT determination, their relevance is generally couched in terms of discussing which available technology, among several, produces less adverse collateral effects, and, if it does, whether that justifies its utilization even if the technology is otherwise less stringent."). The clause allows rejection of the

most effective technology as BACT only in limited circumstances. "[T]he collateral impacts clause operates primarily as a safety valve whenever *unusual circumstances specific to the facility* make it appropriate to use less than the most effective technology." *Columbia Gulf*, 2 E.A.D. at 827 (emphasis added). Unless it is demonstrated to the satisfaction of the permit issuer that such unusual circumstances exist, then the permit applicant must use the most effective technology. *Id.*; see also *In re World Color Press, Inc.*, 3 E.A.D. 474, 478 (Adm'r 1990) ("[T]he collateral impacts clause focuses upon specific *local* impacts which constrain a particular source from using the most effective control technology.") (emphasis added).¹²

On the basis of this standard, we must reject HELCO's claim that a purely hypothetical catastrophic failure of the SCR ammonia system at the proposed KCP facility warrants further consideration as a "collateral environmental impact" in DOH's BACT analysis.¹³ HELCO has failed to show that *any facility anywhere* utilizing SCR technology has experienced such a catastrophic failure, nor has it offered any information that suggests that unusual circumstances

¹²The Draft Manual similarly emphasizes the limited circumstances under which a technology that would otherwise be BACT could be rejected in favor of a less effective technology on the basis of collateral environmental impacts. The Manual states that a control option may be eliminated on the basis of "significant or unusual" collateral environmental impacts if it is shown that "unusual circumstances at the proposed facility create greater problems than experienced elsewhere." Draft Manual at B.47.

¹³As stated above, there is no dispute that DOH addressed potential ammonia slip emissions from the equipment, and concluded that ammonia emissions would pose no adverse health effects. See DOH Response to Comments at 9.

or local conditions predispose KCP's proposed facility to such a failure.¹⁴

Moreover, the administrative record reveals that DOH did consider the potential for ammonia leaks from the system, reviewed the regulatory scheme that governs ammonia handling and storage, and concluded that permit and regulatory safeguards would minimize any risk involved in transporting and storing ammonia. In its response to comments received on the draft KCP permit, DOH explained that:

The permit requires KCP to install a pressure detection system for the safe operation of the ammonia storage tank. Outside of the air permit requirements, there exist state and federal standards for the storage of ammonia. These standards are established to minimize the possibility of ammonia leaks and ensure safe storage by specifying design tank pressures, filling connection valves, pressure relief valves, piping and hose requirements, nearby safety equipment, and minimum ammonia transfer requirements.

¹⁴See *In re Foster Wheeler Passaic, Inc.*, PSD Appeal No. 89-1, 1989 PSD LEXIS 18 (Adm'r 1989) (unpublished) (rejecting collateral impacts challenge to selective non-catalytic reduction technology where there was no showing that ammonia safety concerns were "unusual or unique" to facility, and noting that the "transportation and use of ammonia in densely populated areas is not uncommon" for many industries).

Response to Comments at 6.¹⁵ Apart from merely alleging that DOH did not consider the potential for a catastrophic failure and release of ammonia, and did not respond to comments concerning potential risks posed by the ammonia system (an allegation that is refuted by the foregoing explanation), HELCO has failed to make any demonstration of error in the manner in which DOH considered safety issues associated with the ammonia system. The top-down BACT analysis provided by KCP and reviewed by DOH identified no collateral environmental impacts that rendered the use of SCR infeasible. Admin. Record at 1-H Attachment 1. DOH's response to comments plainly shows that it considered the risks associated with SCR technology, and found them to be minimal. Response to Comments at 6, 9. HELCO's exaggerated claim that DOH has somehow placed human life at risk in its BACT analysis is completely unsupported. Review on the basis of this issue is therefore denied.¹⁶

Further, DOH did consider the issue of disposal of the spent catalyst from the SCR system in evaluating SCR technology as BACT. The administrative record shows that the catalyst is a ceramic-based zeolite catalyst. See Admin. Record at 1-M. DOH contends that this type of catalyst does not contain hazardous materials. DOH's Response at 6. HELCO has not demonstrated that the catalyst contains heavy metal oxides, or may be classified as hazardous waste. In any event, KCP has explained that the spent catalyst will

¹⁵As explained *supra*, n.6, in response to comments received from Region IX, DOH also added a Title V condition to the permit that requires KCP to submit a "risk management plan" for anhydrous ammonia, in accordance with regulatory requirements promulgated under Clean Air Act § 112(r).

¹⁶We note further that in November 1995 Region IX refused to concur in DOH's BACT determination for HELCO's permit application, which did not include SCR technology. See Admin. Record 8-A.

be returned to the manufacturer for disposal or recycling, rather than disposed of in Hawaii, as HELCO fears. Admin. Record at 1-H. Because HELCO has not shown any error in DOH's consideration of the issue of spent catalyst disposal, review on the basis of this issue must be denied.

b. *Maximum Emission Limits*

(1) *Merged Plume Dispersion Analysis*

HELCO argues that the Board should review the permit condition establishing maximum allowable emission limits for sulfur dioxide (SO₂), particulate matter (PM₁₀), carbon monoxide (CO), and oxides of nitrogen (NO_x), because DOH erroneously allowed KCP to utilize a merged plume dispersion modeling technique that is contrary to the PSD regulations, and DOH relied on KCP's estimates of ambient air quality impacts and increment consumption derived from merged plume data in setting maximum emission limits. HELCO's Petition at 11-12. DOH, KCP and Region IX contend that this issue was not raised during the public comment period, and therefore it was not preserved for review. See 40 C.F.R. § 124.13 (all reasonably ascertainable issues concerning draft permit must be raised "by the close of the public comment period"); *id.* § 124.19(a) (petitions for review must include demonstration that issues being raised were raised during public comment period). DOH and Region IX further contend that even if the issue was preserved for review, HELCO has misconstrued the regulations, and that the modeling performed by KCP was consistent with regulatory requirements, in light of the facility's design. DOH's Response at 6-7, Region IX's Response at 11-13.

It is clear from the record that HELCO did not raise this issue in the comments it submitted to DOH during the public comment period. See HELCO Petition, Exhibit A. The record shows that the issue was raised by the Hawaiian Electric Company (HECO, of which HELCO is a subsidiary)

by letter dated August 5, 1994, prior to issuance of the draft permit and the opening of the public comment period in September 1995. *Id.* Exhibit E. The issue was raised by HELCO to Region IX in October 1996 during Region IX's review of the permit, long after the close of the public comment period. *Id.* Exhibit G. However, this issue was not raised by anyone to DOH *during* the public comment period, although, since it had been raised by HECO in August 1994, it was obviously "reasonably ascertainable" to HELCO during the public comment period in 1995. The purpose of requiring all reasonably ascertainable issues to be raised *during* the public comment period is so that the permit issuer can address potential problems with the draft permit before the permit becomes final. See, e.g., *In re Brine Disposal Well, Montmorency County, MI*, 4 E.A.D. 736, 740 (EAB 1993). The permit review process would be unmanageable if a permit issuer was required to discuss every issue raised during the development of a draft permit prior to the public comment period. Thus, HELCO had an obligation to raise the issue *during* the public comment period, even if its parent company had raised it at an earlier stage of the proceeding. Because no comments were received on this issue during the public comment period, DOH could well have assumed that any objections relating to merged plume dispersion techniques had been resolved or abandoned. In accordance with the rules governing appeals of PSD permits, because the merged plume issue was not preserved for review, it must be summarily denied. See *In re EcoEléctrica, L.P.*, PSD Appeal Nos. 96-8 and 96-13, slip op. at 26 (EAB April 8, 1997), 7 E.A.D. ____.¹⁷

¹⁷Further, we agree with DOH and the Region that HELCO's claim is without merit. The facility as originally designed called for two 100-foot stacks. However, KCP submitted an ambient air impact analysis based on a single-stack model. See DOH Response at 7; Admin. Record 1-T at 7-8. Prior to issuance of the draft permit, KCP redesigned the project so that both turbines exhaust to a single 100-foot stack, and then KCP repeated
(continued...)

(2) Terrain Induced Downwash

HELCO contends that DOH erred in establishing maximum emission limits for certain pollutants, because KCP's ambient air quality analysis failed to take into account the potential effect of "terrain induced downwash," *i.e.*, that terrain features in the area surrounding the proposed facility site could create conditions that would allow concentrations of regulated pollutants to exceed the applicable NAAQS or increment limit. HELCO's Petition at 17-18. HELCO argues that "[a]n accurate and complete air quality analysis must consider the impact of terrain downwash, as terrain

¹⁷(...continued)

the air impact modeling based on the new single-stack design. *Id.* HELCO contends that the regulations prohibit KCP from redesigning the facility for one stack and performing modeling based on a single-stack design, when it had originally proposed a two-stack design. See HELCO's Petition at 14-15. The regulations prohibit the use of certain "dispersion techniques" in modeling ambient air quality impacts, including "any technique which attempts to affect the concentration of a pollutant in the ambient air by * * * increasing final exhaust gas plume rise by * * * combining exhaust gases from several existing stacks into one stack * * *." 40 C.F.R. § 51.100(hh)(1)(iii). However, the regulations provide an exception to the prohibition on merged plume modeling where "the facility was originally designed and constructed with such merged gas streams * * *." § 51.100(hh)(2)(ii)(A). Plainly, there were no stacks "existing" when KCP performed its merged plume modeling. See *id.* § 51.100(hh)(1). Moreover, the facility as redesigned and permitted will be constructed with a single stack; therefore the merged plume modeling is not considered a prohibited "dispersion technique". See *id.* § 51.100(hh)(2). We agree with the Region that the plain intent of the regulations is not "to prohibit construction of a stack that combines gas streams, but rather to prohibit post construction merging of gas streams if separate stacks were assumed for air quality impact purposes and originally constructed." Region's Response at 12-13.

downwash effects may influence plume dispersion * * *." *Id.* at 18.¹⁸ HELCO contends that:

The KCP project site is located on the lower slopes of the 5000 foot tall Kohala Mountains, adjacent to the Pacific Ocean. * * * The steep terrain in the project location will have a pronounced effect upon dispersion of emissions. Eddies form, resulting in the rapid mixing of the exhaust plume, sending it downward. Downdrafts, caused by winds blowing down the mountainside, cause the plume to "droop," also sending it downward. Such conditions are likely to result in emission concentrations greater than those identified in KCP's air quality study.

Id. at 17-18. HELCO states that "[t]errain must be considered in downwash calculations under federal and state air regulations," and that EPA-approved techniques exist for addressing terrain downwash. *Id.* at 17, 20-21.

DOH, KCP, and Region IX respond that HELCO has incorrectly confused downwash analysis requirements relating to an applicant's selection of stack height with ambient air quality impact analysis requirements. See DOH's Response at 8; KCP's Response at 14; Region IX's Response at 13. Based upon our review of the applicable regulations, we agree that consideration of terrain downwash effects in the ambient air impact analysis was not required.

¹⁸In performing its ambient air quality impact analysis, KCP used EPA models to predict ambient concentration impacts in simple terrain, complex terrain, and intermediate terrain. Admin. Record 8-F at 26. HELCO has not challenged KCP's use of these models.

Pursuant to the PSD regulations, modeling of terrain downwash is relevant in two circumstances. First, the regulations set forth requirements for performing fluid modeling or field studies of downwash effects when a permit applicant selects a stack height that is *greater* than the "good engineering practice" ("GEP") stack heights set forth in the regulations. See 40 C.F.R. § 51.100(ii)(3).¹⁹ In this instance, KCP designed a stack height of 100 feet, which is the GEP height based on a formula contained in the regulations. See *id.* § 51.100(ii)(2).²⁰ HELCO does not contend that the GEP stack height for the facility is erroneous. Since KCP chose the GEP formula stack height, it was not required to justify a greater stack height through modeling of downwash and other effects. See *id.* § 51.100(ii)(3).

The second circumstance in which downwash modeling becomes relevant is when an applicant uses a stack height that is *lower* than the GEP formula. The regulations provide that "if stacks for new or existing major sources are found to be *less than the height defined by EPA's refined*

¹⁹The regulations provide that the "degree of emission limitation required for control of any air pollutant under this section shall not be affected in any manner by (i) So much of the stack height of any source as exceeds [GEP]." 40 C.F.R. § 52.21(h). As DOH has explained, this means that "[a]n applicant may not receive credit for the dispersion which will occur for that portion of a stack in excess of the GEP stack height. In other words, one may not avoid air pollution control requirements by building a very tall stack exceeding GEP stack heights." DOH's Response at 8. When an applicant designs a stack height greater than that set forth in the formula in the regulations defining GEP stack height, and wants to model ambient air impacts based on the greater height, then the regulations require the applicant to conduct modeling for terrain-induced downwash to justify use of the greater height. See 40 C.F.R. § 51.100(ii)(3).

²⁰The regulations give the permit issuer the discretion to require "a field study or fluid model to verify GEP stack height for the source," see 40 C.F.R. § 51.100(ii)(2)(ii), but this provision is not at issue.

formula for determining GEP height, then air quality impacts associated with cavity and wake effects due to the nearby building structures should be determined. Detailed downwash screening procedures for both the cavity and wake regions should be followed." 40 C.F.R. Part 51, App. W, § 7.2.5. Because KCP's stack height was not lower than the height defined by GEP, then this requirement is inapplicable to it.

Thus, while HELCO is correct that techniques exist for evaluating downwash effects, these techniques are inapplicable except to the extent that an applicant's stack height may deviate (higher or lower) from GEP. Therefore, DOH committed no clear error by not requiring KCP to conduct terrain downwash modeling in its ambient air impact analysis.²¹ Further, after HELCO raised the downwash issue with DOH, KCP did provide DOH and HELCO with a terrain downwash modeling algorithm analysis derived from GEP guidelines. KCP's analysis concluded that "under the worst case conditions, the stack plume will remain above any terrain-induced cavity and no downwash effect will occur. If terrain-influenced downwash will not occur under these worst-case conditions, it will not occur at all." Admin. Record 1-HH at 4. HELCO has

²¹In the course of evaluating KCP's application, DOH contacted Region IX and explained that:

[DOH] is of the understanding that currently there are no known and acceptable techniques to quantify absolute concentrations resulting from terrain induced downwash. As such, [DOH] is processing these applications and is proposing to defer any evaluation until the U.S. [EPA] promulgates terrain induced downwash guidance. If techniques are available, [DOH] will request the applicants to evaluate terrain induced downwash.

Admin. Record 1-JJ at 1. The Region has confirmed that it supports this approach. See Region's Brief at 13-16.

provided no information or argument to challenge this conclusion, nor has HELCO shown that a different modeling method would necessarily have resulted in a different conclusion.

2. Individuals' Petitions

a. Timeliness of Growney and Hicks Petitions

KCP contends that the petitions of James Growney and Frank Hicks were filed more than 30 days after the final permit decision was issued, and should therefore be dismissed. The rules governing appeals from PSD permit decisions provide that within 30 days after issuance of a final PSD permit decision, any person who filed comments on the draft permit or participated in the public hearing may petition the Board for review of the permit decision. 40 C.F.R. § 124.19(a). The 30-day period within which an appeal must be filed commences with service of notice of the permit decision, unless a later date is specified in the notice. *Id.* When the permit decision is served by mail, three days are added to the filing period. *Id.* § 124.20(d).

In this instance, KCP contends that notice of the permit decision was served on October 29, 1996.²² The thirty-third day following October 29 was Sunday, December 1, 1996. Because the last day fell on a Sunday, the following day, Monday, December 2, 1996, would have been the last day on which a petition could be filed. The Board received both Hicks' and Growney's petitions in its office on December 4, 1996. However, DOH's decision letter had erroneously advised recipients that they should file their appeals with EPA's Headquarters Hearing Clerk, rather than with the Board. Admin. Record 8-A at 2. The Headquarters Hearing Clerk is not in the same location as the Board, and it frequently takes several days for mail that is misdirected to the EPA Headquarters Hearing Clerk to reach the Board's office. The record shows that Hicks' petition was stamped

²²The notice letter sent by DOH is dated October 24, 1996. Admin. Record 8-A. For purposes of KCP's motion, we will assume that the notice was not served (mailed) until October 29, 1996.

"received" by the Headquarters Hearing Clerk on November 26, 1996, well within the filing deadline. Petitioner should not be prejudiced for relying upon the erroneous mailing address provided by DOH. Therefore, the petition will be deemed timely filed.

As to Mr. Growney's petition, the record shows that it was stamped "received" by the Headquarters Hearing Clerk on December 4, 1996, two days beyond the filing deadline. However, the Board routinely accepts as timely any petitions that are received by EPA's mailroom within the filing deadline, since the Board's mail is directed to a mailroom at EPA Headquarters prior to distribution to the Board's office. *E.g., In re Beckman Production Services*, UIC Appeal Nos. 92-9 through 92-16, slip op. at 7 n.8 (EAB Jan. 24, 1994), 6 E.A.D. _____. Mr. Growney's petition was not date-stamped by EPA's mailroom prior to distribution to the Headquarters Hearing Clerk, so the Board cannot determine when it was actually received by the mailroom. In that the Headquarters Hearing Clerk received it on December 4, Mr. Growney's petition may well have been received by the mailroom within the filing deadline. The Board will therefore resolve this ambiguity concerning the timeliness of the petition in Mr. Growney's favor, and address the petition on the merits.²³

b. Merits of Individuals' Petitions

²³In an affidavit submitted by Mr. Growney in response to KCP's contention that the petition was untimely, Mr. Growney attests that he mailed his petition for review on November 18, 1996, which should have allowed for timely receipt. See Affidavit of Growney at 2. Mr. Growney also contends, however, that service of his petition upon the Board was complete upon mailing, and thus his petition was timely regardless of when it was received by the Board. Growney's Reply at 1. This is incorrect. The Board has consistently held that petitions for review must be *received* by the Board (or received by the mailroom) within the filing deadline to be timely. *E.g., Beckman Production Services*, slip op. at 7 n.8, 6 E.A.D. ____.

The petitions filed by Ms. Tanimoto, Ms. Dela Cruz, Mr. Hicks, and Mr. Growney collectively raise numerous issues concerning the draft permit. However, to a great extent the petitions merely reiterate comments that were provided to DOH during the course of public review of the proposed permit. As previously noted, to obtain review of a permit decision it is not enough for petitioners to recite comments that were previously provided to a permitting authority. Rather, the Board has explained that:

[I]n order to establish that review of a permit is warranted, § 124.19(a) requires a petitioner to both state the objections to the permit that are being raised for review, and to explain why the permit decision maker's previous response to those objections (*i.e.*, the decision maker's basis for the decision) is clearly erroneous or otherwise warrants review. *In re Puerto Rico Electric Power Authority*, PSD Appeal No. 95-2, slip op. at 3 (EAB, Dec. 11, 1995), 6 E.A.D.____; *In re Genesee Power Station L.P.*, 4 E.A.D. 832, 866 (EAB 1993).

In re Commonwealth Chesapeake Corp., PSD Appeal Nos. 96-2 through 96-5, slip op. at 8 (EAB, Feb. 19, 1997), 6 E.A.D. _____. With that standard in mind, we will address each issue raised by petitioners in turn.

(1) Analysis of SCR as BACT

Petitioners Tanimoto and Growney contend that SCR is an "unproven" technology that was not properly studied or documented in the course of the permit proceeding. Petitioners suggest that SCR may not provide the lowest NO_x reduction available, or may not perform as represented by KCP.

DOH addressed this issue in some detail in its response to comments. The record contains a top-down BACT analysis performed by KCP's consultants. Admin. Record 1-H.²⁴ Based on this analysis, there can be no real dispute that the water/steam injection plus SCR technology proposed as BACT for this facility provides the most effective control of NO_x. With SCR, the NO_x emission rate is reduced to 15 ppmvd. Using water injection alone (the next most stringent technology) results in a NO_x emission rate of 42 ppmvd.²⁵ Admin. Record 1-H at 1. Moreover, SCR technology has been utilized at numerous facilities, and is not (as petitioners contend) "unproven" in terms of control effectiveness. Petitioners concerns apparently go to a perceived lack of detail in the BACT analysis. As DOH explained in its response to comments:

DOH acknowledges the BACT analysis for SCR did not discuss in detail the potential problems that may occur with high temperature operations, possible deposit build up in the heat recovery steam generator resulting from fuel oil firing, and variable temperatures associated with peaking operations. Detailed analyses and documentation are typically required if a top control option is rejected as BACT. If the applicant cannot adequately justify the elimination of a top control technology based on energy, environmental, and economic impacts, the BACT selection should default to this control technology (EPA's Draft New Source Review Manual, October

²⁴The top-down method is described *supra*, Part II.A.

²⁵HELCO, DOH, KCP, and Region IX are all in agreement on this point. HELCO's challenge does not concern whether SCR in fact provides the greatest control of NO_x, but whether other factors nevertheless render the technology infeasible. See *supra* Part II.C.1.

1990). Since KCP proposed the highest control option for NO_x, a detailed analysis was not required. The basis for their acceptance [was] vendor guarantees and studies, and performance of other candidates believed to be comparable.

DOH would like to emphasize that in proposing an emission limit based on a control technology as BACT, the applicant will be fully responsible for compliance with such emission limit and for the proper design and operation of the controls. Improper design or operation of the controls, or the occurrence of any operating or technical problems does not relieve KCP from complying with the permit emission limits. If KCP fails to perform as permitted, they will be subject to enforcement actions.

* * * * *

Pursuant to EPA's Draft New Source Review Workshop Manual, October 1990, an applicant proposing the top control alternative is not required to provide cost data on other possible control alternatives. Since the proposed technology would result in the highest reduction of NO_x emissions, a comprehensive cost analysis between control alternatives was not performed.

Response to Comments at 8. Petitioners have pointed to no error in this response, which appears to fully address the issue as raised in comments and the petitions for review. The DOH response is consistent with EPA's top-down

approach to BACT selection.²⁶ Because petitioners have not explained why DOH's response on this issue is erroneous, we must deny review of this issue.

(2) Baseline Studies

Petitioners Tanimoto and Growney contend that studies of baseline levels of air pollution were not performed or were performed improperly, and that studies were not conducted for PM₁₀ and total suspended particulates.

These same issues were raised during the public comment period, and DOH responded to them in detail.²⁷

²⁶As the Region explains:

[O]ne purpose of the PSD provisions of the Clean Air Act and its implementing regulations is to allow for the advance of technology in its application to pollution reduction. For this reason, BACT continues to evolve and improve, and can become applicable to broader categories of sources. When, as here, the technology that is chosen by the permitting agency achieves the highest level of pollutant reduction, the available information indicates a high probability that it is technically feasible, and it meets the other requirements of the top down analysis, the use of such technology as BACT should be encouraged in order to promote new applications of existing technologies.

Region's Response at 7-7.

²⁷Region IX and KCP contend that Tanimoto and Growney did not raise these issues during the public comment period, and therefore review should be denied on that basis. However, the record shows that these issues were raised by other commenters during the public comment period. See Response to Comments at 14-15. To preserve an issue for review, it is not necessary that *petitioners* have personally raised the issue, only that the issue have been raised by someone during the public comment period. See, e.g., *In re Masonite Corp.*, 5 E.A.D. 551, 559 n.9 (continued...)

See Response to Comments at 14-15. DOH explained that it allowed KCP to use data collected at other areas to characterize the air quality in Kawaihae, and that the data used were a conservative representation of Kawaihae's air quality, since they were taken from areas more populated or developed than Kawaihae. *Id.* at 14. Because anticipated emissions from the proposed facility were below *de minimis* levels for nitrogen dioxide and carbon monoxide, KCP was exempted from one-year preconstruction ambient air quality monitoring requirements for those pollutants. *Id.*; see *In re EcoEléctrica, L.P.*, PSD Appeal Nos. 96-8 & 96-13, slip op. at 8-10 (EAB, Apr. 8, 1997), 7 E.A.D. ____ (permit issuer has discretion to exempt applicant from monitoring requirements where emissions will not exceed monitoring *de minimis* levels) (citing 40 C.F.R. § 52.21(i)(8)(i)); Draft Manual at C.25. KCP was required to furnish monitoring data for sulfur dioxide and particulate matter, because predicted peak impacts for those pollutants exceeded *de minimis* levels. Consistent with EPA monitoring guidance, DOH allowed KCP to use representative air quality data for those pollutants, in lieu of conducting preconstruction monitoring. Response to Comments at 15.

Petitioners have pointed to no flaw in DOH's approach to baseline monitoring, as outlined in DOH's response to comments. As Region IX points out, EPA's ambient air monitoring guidelines give permit authorities the discretion to allow representative data submissions (as opposed to conducting new monitoring) on a case-by-case basis. Region's Response at 17 (citing Ambient Monitoring Guidelines for PSD, EPA-450/4-87-007 (May 1987)); *In re Hibbing Taconite Co.*, 2 E.A.D. 838, 851 (Adm'r 1989) (monitoring guidelines "are very broad and leave much to the discretion of the permitting authority"). Petitioners have not

²⁷(...continued)
(EAB 1994).

explained why such an approach is impermissible here, nor have they alleged that a different approach to monitoring would have resulted in different permit conditions. We therefore deny review of this issue.²⁸

(3) *Meteorological Studies*

Petitioners Tanimoto and Growney claim that studies of meteorological conditions were inadequate and of insufficient duration to accurately illustrate meteorological conditions in the Kawaihae area. These same issues were raised during the public comment period, and addressed in detail by DOH in its response to comments. DOH explained that KCP performed one year's worth of site-specific meteorological monitoring, in accordance with regulatory requirements. Response to Comments at 16; see 40 C.F.R. 51, App. W § 9.3 (Meteorological Input Data). Petitioners have not shown that DOH's conclusion was erroneous, that the meteorological monitoring performed by KCP was inadequate in any way, or that it was inconsistent with

²⁸DOH also notes that, in response to commenters' concerns, it further analyzed the impact of the KCP facility using two recent data sets. DOH's Response at 12. One set was collected at Hawaii's largest industrial area, and the other at a site closer to an erupting volcano than Kawaihae (the volcano is a source of sulfur emissions as well as other pollutants). *Id.* DOH states that:

Despite the use of background data from these more populated and developed areas, the final conclusion did not change. KCP continued to show compliance with the ambient air quality standards. * * * The department believes the data used by KCP is a conservative representation of Kawaihae's air quality, and requiring an additional year of data collection will not change the analysis.

Id.

regulatory requirements. Review on the basis of this issue must therefore be denied.

(4) *Environmental Impact Statement*

Petitioners Tanimoto, Growney, and Dela Cruz contend that the effect of the plant on soils, vegetation, and commercial and recreational property values has not been properly analyzed, nor has the potential effect of hurricanes and waterspouts been analyzed. Petitioners claim that KCP and DHHL have failed to prepare an environmental impact statement ("EIS") in connection with the proposed facility, as required by law.

Although other provisions of law may require preparation of an EIS for other purposes, there is no requirement that an EIS be prepared in connection with the PSD permit process.²⁹ As the Region points out, actions taken under the Clean Air Act (including issuance of a federal PSD permit) are exempt from the EIS requirement contained in the National Environmental Policy Act ("NEPA"). See Region's Response at 5 (citing 15 U.S.C. § 793(c)(1) ("No action taken under the Clean Air Act shall be deemed a major federal action significantly affecting the quality of the human environment within the meaning of [NEPA]."); *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375 (1973); *Ethyl Corp. v EPA*, 541 F.2d 1 (1976)); *EcoEléctrica, L.P.*, slip op. at 26 n.27, 7 E.A.D. ____ (noting that PSD permitting process does not require the preparation of an EIS).³⁰ While receipt of a PSD permit does not relieve KCP of any obligation to comply with any applicable provision of State law (including

²⁹DOH notes that the issue of whether DHHL should have prepared an EIS is "a state question currently before the Hawaii Supreme Court." DOH's Response at 13.

³⁰See also 40 C.F.R. § 124.9(b)(6) ("PSD permits are not subject to the [EIS] provisions of [NEPA].").

preparation of an EIS, if KCP is required by State law to do so), there was no basis for DOH to require KCP to prepare an EIS in connection with this PSD permit proceeding.³¹

Further, KCP did provide an "additional impact analysis" in connection with its Ambient Air Quality Impact Analysis that assesses the effects on soils and vegetation that are anticipated as a result of the facility and growth associated with the facility. Admin. Record 8-F at 29-31. The regulations require an applicant to analyze potential impacts on soils and vegetation that may occur as a result of a proposed project. The regulation specifically provides that the owner or operator of a proposed source:

[S]hall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source * * * and other growth associated with the source * * *. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.

40 C.F.R. § 52.21(o)(1). KCP's analysis showed that the site is "thinly vegetated" with non-indigenous plant species, has rocky soil, and has "very poor productivity potential for agricultural, orchard and grazing uses." Admin. Record 1-A at 83. The analysis concluded that emissions from the plant would be "well below" state and national ambient air quality standards, including the secondary NAAQS, which are intended to prevent adverse impacts to the public welfare, including impacts on soils and vegetation. *Id.* at 84; see 42 U.S.C. § 7409(b)(2). The analysis further concluded that "no

³¹Permit condition 7 expressly requires KCP to obtain any other approvals that are required by law. Admin. Record 8-B, Attachment I Condition 7.

adverse impacts on soils and vegetation are expected.” Admin. Record 1-A at 84.³²

Petitioners have provided no information that contradicts DOH's conclusion that the plant will not adversely affect soils and vegetation in the area. Petitioners have not shown that the soils and vegetation have any significant commercial or recreational value that would be negatively impacted by the plant, nor have they shown that there are sensitive plant species that would be harmed by exposure to concentrations of pollutants below the secondary NAAQS.³³ Accordingly, review on the basis of these issues must be denied.

³²KCP also points out that it consulted with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, and those entities concurred in KCP's determination that the project would not adversely impact endangered species or marine life. KCP's Response at 20.

³³As the Draft Manual explains:

For most types of soils and vegetation, ambient concentrations of criteria pollutants below the secondary [NAAQS] will not result in harmful effects. However, there are sensitive vegetation species (e.g., soybeans and alfalfa) which may be harmed by long-term exposure to low ambient air concentrations of regulated pollutants for which there are no NAAQS.

Draft Manual at D.5.

(5) Emissions of Sulfur, Ammonia and**Lead**

Petitioners Tanimoto and Growney contend that the plant will generate "excessive" amounts of sulfur, ammonia, lead and unspecified "other dangerous chemicals." Petitions of Tanimoto and Growney at 3. Petitioners Tanimoto and Growney also contend that the proposed waste ammonia disposal plan was not addressed in the permit process; that the permit does not require use of lowest sulfur fuels; and that DOH "wrongfully dismissed" concerns regarding additions to existing levels of sulfur as a result of the erupting volcano. *Id.* Petitioners argue that in light of these claims, DOH erroneously concluded that the facility would comply with PSD regulations and the NAAQS.

Petitioners claims are not supported by the record. As DOH has explained, detailed analyses of expected emissions show that emissions of sulfur and lead will not cause any violations of federal and State ambient air quality standards, and that ammonia emissions will pose no threat to health. See DOH Response at 14 (citing Admin. Record 8-D at 9, 19, 8-F at 24-28, 33-34, 38). DOH has determined that KCP is not a major source for any hazardous air pollutants. *Id.* (citing Admin. Record 8-F at 33; 40 C.F.R. § 70.2). Further, the facility is not expected to produce any "waste ammonia." *Id.*

With respect to the use of low-sulfur fuels, the record shows that DOH considered low-sulfur (0.08% by weight) naphtha fuel as BACT for SO₂, but ultimately decided not to select naphtha as BACT because of concerns for long-term availability and cost of the fuel on the island. Admin. Record 8-E at 3. The permit instead allows KCP to use a 0.4% by weight sulfur content diesel fuel as BACT for SO₂. *Id.* However, because KCP offered to burn low-sulfur naphtha for the first two years, and thereafter when it is available and cost effective, the permit allows KCP to burn naphtha. *Id.* at

4. Petitioners have raised no specific challenge to DOH's SO₂ BACT analysis apart from merely contending that the permit allows use of "high sulfur" fuels. To the extent that the permit allows use of fuels with greater sulfur content than naphtha, DOH's decision is fully explained and supported by the record.

As to DOH's treatment of volcanic sulfur emissions, DOH has explained that:

[Petitioner's claim] probably is in reply to [DOH's] response to the public comments. [Admin. Record 8-D at 5]. A comparison of KCP's sulfur emissions to the erupting volcano was made merely to give the public a perspective as to the amount of sulfur emissions from KCP. The comparison was *not* used as a basis to dismiss the sulfur impacts from the project. Evaluation of sulfur impacts were performed pursuant to regulations in determining compliance with ambient standards. The resulting analysis considered the cumulative impact of KCP's sulfur emissions upon existing background levels, including the emissions from the volcano, and showed that the project's maximum impacts would be in compliance with federal and state ambient air quality standards.

DOH's Response at 16 (footnote omitted) (citing Admin. Record at 8-F; 40 C.F.R. §§ 50.4 & 50.5).

In light of the foregoing, petitioners' unsupported allegations do not persuade us that review on the basis of these issues is warranted. Review is therefore denied.

(6) *Emission of Greenhouse Gases*

Petitioners Tanimoto and Growney contend that DOH ignored greenhouse gas emissions, contrary to international agreements concerning global warming. DOH explained in its response to comments on this same issue that:

"Greenhouse" gases, mainly carbon dioxide, that could contribute to global warming will be emitted from the operation of the proposed power plant. However, at this time there are no regulations or standards prohibiting, limiting or controlling the emissions of greenhouse gases from stationary sources. Carbon dioxide is not considered a regulated air pollutant for permitting purposes. In addition, no guidance is currently available to assess a source's carbon dioxide contribution to global warming.

Response to Comments at 18. Petitioners have provided no information that suggests DOH's conclusion, as explained in its response to comments, is erroneous.³⁴ Accordingly, review on the basis of this issue must be denied.

(7) Procedural and Administrative

Defects

Petitioners Tanimoto, Growney and Dela Cruz argue that the permit process was "marred by numerous and significant procedural and administrative defects," including a "confusing" version of the administrative record which DOH provided for public comment, and the failure of KCP to submit an application in "proper form." Petitions of

³⁴Region IX similarly urges us to deny review of this issue, arguing that while PSD permit proceedings can, in appropriate cases, address broader concerns than protection of the NAAQS and increments, there is no error in the way in which DOH addressed the greenhouse gas issue. Region's Brief at 18-19.

Tanimoto and Growney at 4; see Petition of Dela Cruz at 2. The particular defects, and the manner in which such defects may have prejudiced petitioners' rights, are not specified in the petitions. DOH suggests that confusion may have arisen because, in an effort to facilitate review, it asked KCP to prepare an "unofficial" version of the administrative record for public review that contained only the "most current" information concerning the application. DOH's Response at 17. The resulting file was marked "unofficial" and included an explanation of its purpose. *Id.* Both the "official" and "unofficial" versions of the record were made available for review. *Id.* at 17-18. DOH states that three pages were missing from the official file due to a photocopying oversight, but that the pages were replaced within a day and later mailed to all persons who submitted comments on the permit. *Id.* at 18. DOH further states that objections to the "proper form" of the application appear to relate to whether the person signing the application had appropriate authority to do so. See *id.*; Response to Comments at 24.³⁵

Our review of the record as provided to us and the transcript from the public hearing does not disclose any apparent defects of process. It is clear that petitioners were afforded ample opportunity to review and provide comment on the proposed permit, and to pursue their right to seek review before the Board. We recognize that the decisions that a permitting agency must make with respect to a PSD permit application are inherently technical and complicated, and the resulting administrative record can be large and difficult to digest. In an effort to aid public review, DOH may have inadvertently created some minor (and short-term) confusion.

³⁵DOH explained in its response to comments that the person signing the application, Mr. Makoto Saito, had authority to do so as a "responsible official," since he is the Senior Vice President of Kaimana Energy, one of KCP's general partners. Response to Comments at 24. There is no express allegation in the petitions that Mr. Saito was not so authorized.

Nevertheless, absent some specific demonstration of prejudice, petitioners' vague allegations do not persuade us that review on the basis of this issue is warranted.

(8) *General Claims of Environmental Harm*

Petitioners generally contend that the KCP facility will adversely affect human health and the environment in the area surrounding the facility, including important native religious and historic sites. See Petitions of Tanimoto and Growney at 4. These allegations are not supported by the record. DOH concluded on the basis of KCP's air quality analyses that the anticipated emissions from the plant would not exceed any applicable PSD increment, NAAQS, or State ambient air quality standard. The standards are established to protect human health and public welfare and the environment. See 42 U.S.C. § 7409. Petitioners have provided no information that suggests DOH's conclusion is erroneous, nor can we find any in the record. Review on the basis of this issue must therefore be denied.

(9) *Displacement of Natives*

Petitioner Dela Cruz contends that native Hawaiians will be displaced from their homes so that the KCP plant may be built. Dela Cruz Petition at 1. The factual basis for this claim is not explained, and the issue as framed by petitioner is too non-specific to provide a basis for review. See *Commonwealth Chesapeake Corp.*, slip op. at 11-12, 6 E.A.D. _____. Further, DOH points out that land use issues relating to the Hawaiian Home Lands are within the jurisdiction of the DHHL. DOH Response at 19. As explained earlier, DHHL leased the land to Waimana Enterprises, which subleased it to KCP for construction of the plant. DHHL provided comments during the public hearing on the permit supporting construction of the plant. Admin. Record 4-C at 16-20. It appears that petitioner's concerns relate to DHHL's

decision to allow the plant to be built on Hawaiian Home Lands, rather than to any specific permit action taken by DOH. It was therefore not clear error for DOH to choose not to address this issue in the permit process. *See EcoEléctrica, L.P.*, slip op. at 24, 7 E.A.D. ____ (permit issuer did not err by not declining to issue a PSD permit based upon concerns that were more appropriately deferred to a different agency); *Commonwealth Chesapeake Corp.*, slip op. at 24, 6 E.A.D. ____ (same). Review on the basis of this issue must therefore be denied.

**(10) Review of Ammonia
Risk Management Plan**

Petitioner Frank Hicks contends that the requirement in the final permit that KCP submit a risk management plan relating to storage and handling of ammonia is a "permit modification" that should be subject to public review and comment. As explained *supra*, note 6, the provision was added to the permit in response to a comment received from EPA Region IX concerning the applicability of the requirements of Clean Air Act § 112(r) (prevention of accidental releases) to the ammonia unit, in connection with Title V operating permit requirements. See Admin. Record 7-A. Hicks contends that the public should have an opportunity to review KCP's risk management plan.

The permit condition in question relates to Title V operating permit requirements, and the Board does not have jurisdiction to review the non-PSD Title V portion of this permit, since that portion of the permit is a State permit. See *West Suburban Recycling and Energy Center*, PSD Appeal Nos. 95-1 and 96-1, slip op. at 18 (EAB, Dec. 11, 1996), 6 E.A.D. ____ ("Where a permit proceeding involves requirements under both state and federal law, the scope of the Board's review is limited to issues relating to the federal PSD program and the Board will not assume jurisdiction over permit issues unrelated to the federal PSD program."); *In re American Ref-Fuel Company of Essex County*, 2 E.A.D. 280, 281 (Adm'r 1986) (only that portion of a State-issued combined permit relating to the federally delegated PSD authority is reviewable under 40 C.F.R. § 124.19). Accordingly, review on the basis of this issue must be denied.

**(11) Citation to Hawaii
Administrative Regulations**

Petitioners Tanimoto and Growney contend that DOH erred by citing H.A.R. § 11-60.1-1 *et seq.* in the permit, when

those rules (relating to Hawaii's Clean Air Act Title V operating permit program) have not been incorporated in Hawaii's State Implementation Plan (SIP). As explained above, the Board does not have jurisdiction to review the non-PSD portion of this permit. Review on the basis of this issue is therefore denied.³⁶

III. Conclusion

For the foregoing reasons, the petitions for review are hereby denied.

So ordered.

³⁶Region IX has explained that the permit was issued pursuant to both the PSD regulations (incorporated in Hawaii's SIP at H.A.R. § 11-60-01 *et seq.*) and pursuant to Hawaii's "covered source permit" (CSP) program under H.A.R. § 11-60.1-1 *et seq.* Hawaii's CSP program was approved by EPA on December 1, 1994, in accordance with Clean Air Act requirements. 59 Fed. Reg. 61,549; 61 Fed. Reg. 56,368 (Oct. 31, 1996). The program does not need to be approved into Hawaii's SIP. See Region's Response at 4 n.1 (citing 40 C.F.R. § 70).